

# **Abstract**

A processing unit and method are described herein that are capable of estimating a quality of a speech signal transmitted through a wireless network. The processing  
5 unit uses a logistic function to map a score output from an objective voice quality method (PESQ algorithm) into a mean of opinion (MOS) score which is an estimation of the quality of the speech signal that was transmitted through the wireless network. The logistic function has the form:  
10  $y = 1 + 4 / (1 + \exp (-1.7244 * x + 5.0187))$  where  $x$  is the score from the PESQ algorithm which is in the range of -0.5 to 4.5 and  $y$  is the mapped MOS score which is in the range of 1 to 5 wherein if  $y=5$  then the quality of the speech signal is considered excellent and if  $y=1$  then the quality  
15 of the speech signal is considered bad.